

Applicants : Philip O. Livingston and Friedhelm Helling
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Exhibit A

--78. (Amended) A composition which comprises:

- a) a conjugate of i) a ganglioside derivative which comprises an unaltered oligosaccharide part and an altered ceramide portion comprising a sphingosine base, to ii) Keyhole Limpet Hemocyanin or a derivative thereof comprising an ϵ -aminolysyl group;
- b) a saponin derivable from the bark of a Quillaja saponaria Molina tree; and
- c) a pharmaceutically acceptable carrier;

the relative amounts of such conjugate and such saponin being effective to stimulate or enhance antibody production in a subject;

wherein the ganglioside derivative is a derivative of a ganglioside selected from the group consisting of GM2, GM3, GD2, GD3, GD3 lactone, O-acetyl GD3 and GT3; and wherein in the conjugate the ganglioside derivative is conjugated to Keyhole Limpet Hemocyanin or the derivative thereof through a C-4 carbon of the sphingosine base of the ceramide portion of the ganglioside derivative to the ϵ -aminolysyl group of Keyhole Limpet Hemocyanin or the derivative thereof.--

--93. (Amended) A method of stimulating or enhancing antibody production in a subject which comprises administering to the subject an effective amount of a composition which comprises:

- a) a conjugate of i) a ganglioside derivative which comprises an unaltered oligosaccharide part and an

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altered ceramide portion comprising a sphingosine base, to ii) Keyhole Limpet Hemocyanin or a derivative thereof comprising an ϵ -aminolysyl group;

- b) a saponin derivable from the bark of a Quillaja saponaria Molina tree; and
- c) a pharmaceutically acceptable carrier;

the relative amounts of such conjugate and such saponin being effective to stimulate or enhance antibody production in the subject;

wherein the ganglioside derivative is a derivative of a ganglioside selected from the group consisting of GM2, GM3, GD2, GD3, GD3 lactone, O-acetyl GD3 and GT3; and wherein in the conjugate the ganglioside derivative is conjugated to Keyhole Limpet Hemocyanin or the derivative thereof through a C-4 carbon of the sphingosine base of the ceramide portion of the ganglioside derivative to the ϵ -aminolysyl group of Keyhole Limpet Hemocyanin or the derivative thereof, so as to thereby stimulate or enhance antibody production in the subject.--

--95. (Amended) A method of [preventing or] treating a cancer in a subject which comprises administering to the subject an effective cancer [preventing or] treating amount of a composition which comprises:

- a) a conjugate of i) a ganglioside derivative which comprises an unaltered oligosaccharide part and an altered ceramide portion comprising a sphingosine base, to ii) Keyhole Limpet Hemocyanin or a

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derivative thereof comprising an ϵ -aminolysyl group;

b) a saponin derivable from the bark of a Quillaja saponaria Molina tree; and

c) a pharmaceutically acceptable carrier;

the relative amounts of such conjugate and such saponin being effective to stimulate or enhance antibody production in the subject;

wherein the ganglioside derivative is a derivative of a ganglioside selected from the group consisting of GM2, GM3, GD2, GD3, GD3 lactone, O-acetyl GD3 and GT3; and wherein in the conjugate the ganglioside derivative is conjugated to Keyhole Limpet Hemocyanin or the derivative thereof through a C-4 carbon of the sphingosine base of the ceramide portion of the ganglioside derivative to the ϵ -aminolysyl group of Keyhole Limpet Hemocyanin or the derivative thereof, so as to thereby [prevent or] treat a cancer in the subject.--

--96. (Amended) The method of claim [94 or] 95, wherein the cancer is of epithelial origin.--

--97. (Amended) The method of claim [94 or] 95, wherein the cancer is of neuroectodermal origin.--

--99. (Amended) The method of [any one of] claim[s] 93[-] or 95, wherein the administering is effected at two or more sites.--